

Wild Turkey

2017-2018 Annual Report

October 2018



Wild turkeys are an important game bird in Maryland, providing recreation and enjoyment for many hunters, wildlife enthusiasts and citizens. Turkey hunting alone results in an economic benefit to Maryland of nearly \$5 million annually.



Following a period of population stabilization in the 2000's, the statewide wild turkey population has grown significantly over the last 10 years and likely numbers over 40,000. Much of the increase can be attributed to recent increases in the central region's turkey population. Data suggest that turkey numbers and range in areas of previously low populations have increased at a rapid rate. However populations in the western region and portions of the eastern shore have stabilized at levels below their previous high densities. Densities also vary considerably across the state and within regions due to differences in habitat quality and recent reproduction success.

Over 11,000 hunters annually pursue turkeys in the spring, fall or winter hunting seasons in Maryland. Only deer and waterfowl attract more hunting participation. The 2017 fall turkey harvest of 105 was slightly lower than the 2016 harvest and reflects a long-term decline in participation during the fall season. A total of 87 turkeys were reported harvested during the three day winter turkey season. The 2018 spring season harvest of 3,861 was 8% lower than the prior year's record setting harvest. Below-average reproduction in most of the state likely contributed to the decrease.

Reproductive success in the summer of 2018 was estimated to be at a record low in nearly all parts of the state. Nesting success, as well as poult survival, appeared to be poor in most areas, possibly a result of persistent wet weather during nesting season. This is the 3rd consecutive year of low production in most of the state and may possibly effect sightings and harvest in the coming years.

A long-term decline in reproductive success and turkey populations has been documented in many states. Ongoing research is inconclusive but habitat changes and predator populations have been suggested as contributing factors in the declines.

More detailed information about the wild turkey population status, hunting statistics and surveys can be found in the following report.

POPULATION STATUS

Maryland's wild turkey population has increased over the past 10 years in all regions except the western and lower eastern shore regions (Figure 1). Density indices (2016-18 average spring turkey kill per forested mi²) are categorized as high in 10 counties (>1 kill/mi²), moderate in 9 counties (0.5-1.0 kill/mi²), and low in the remaining 4 counties (<0.5 kill/mi², Table 1). The highest densities of turkeys are still found in the western mountains, the eastern region, and portions of the southern region (Figure 2). However the central region's population has grown significantly in recent years at an estimated 12% per year. Complaints involving wild turkeys in suburban areas have increased slightly in recent years, but are still somewhat rare.

Table 1. Maryland's reported spring gobbler season harvest, 2012-2018.

County	2012	2013	2014	2015	2016	2017	2018	% Change 2017-2018	10-year Average	Average kill/ sq. mi. 16-18
Allegany	257	269	258	298	256	293	250	-14.7	284	0.85
Anne Arundel	58	82	54	62	45	58	49	-15.5	54	0.31
Baltimore	29	37	32	35	52	51	55	7.8	37	0.25
Calvert	50	57	59	69	73	59	76	28.8	57	0.64
Caroline	164	142	141	159	172	149	135	-9.4	142	1.58
Carroll	30	33	45	62	76	103	103	0.0	52	0.90
Cecil	43	55	57	67	69	87	69	-20.7	54	0.59
Charles	303	270	254	253	265	320	336	5.0	262	1.14
Dorchester	219	245	239	252	274	303	212	-30.0	240	1.49
Frederick	140	215	193	256	299	332	313	-5.7	210	1.39
Garrett	368	386	383	421	387	429	412	-4.0	383	0.95
Harford	98	110	97	102	110	127	105	-17.3	95	0.78
Howard	16	16	10	16	34	24	36	50.0	18	0.42
Kent	103	118	150	164	181	174	168	-3.4	133	2.42
Montgomery	51	82	68	97	94	135	149	10.4	82	0.89
Prince George's	92	78	79	87	87	91	76	-16.5	82	0.46
Queen Anne's	152	159	165	183	190	160	115	-28.1	149	1.57
St. Mary's	122	124	120	169	150	163	145	-11.0	136	0.81
Somerset	99	127	173	193	188	202	191	-5.4	141	1.79
Talbot	102	103	83	68	88	94	80	-14.9	93	1.39
Washington	292	309	343	392	355	426	459	7.7	347	2.31
Wicomico	152	124	146	138	206	175	139	-20.6	154	1.20
Worcester	192	203	176	224	223	220	188	-14.5	201	0.87
State	3132	3344	3325	3767	3874	4175	3861	-7.5	3406	1.03

Maryland Estimated 10-year Wild Turkey Population Trends by Region Based on Spring Turkey Harvest, 2009-2018

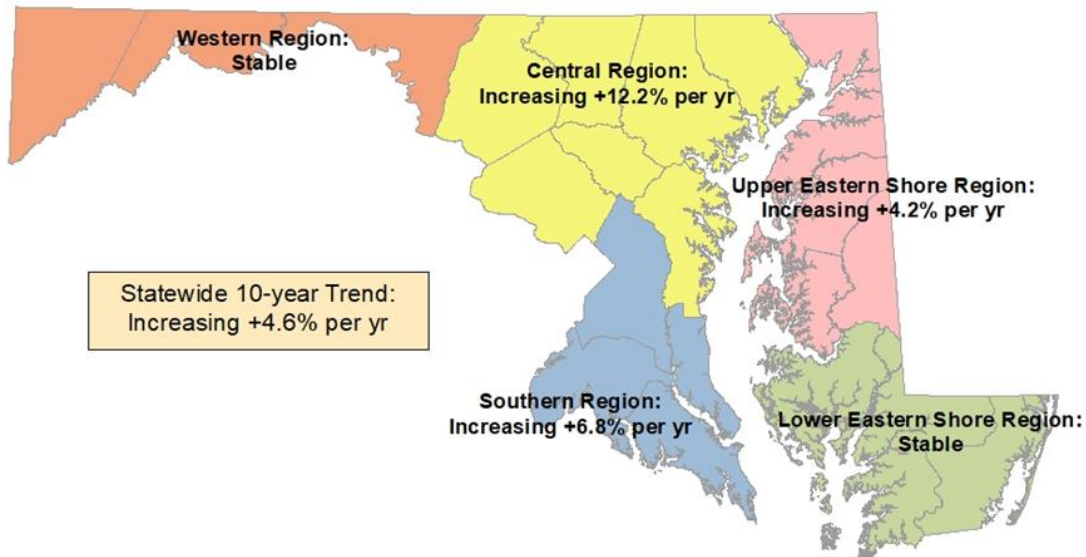


Figure 1. Maryland wild turkey 10-year population trends based on spring turkey harvest, 2009-2018.

Average Spring Turkey Harvest per Square Mile of Forest, 2016-18

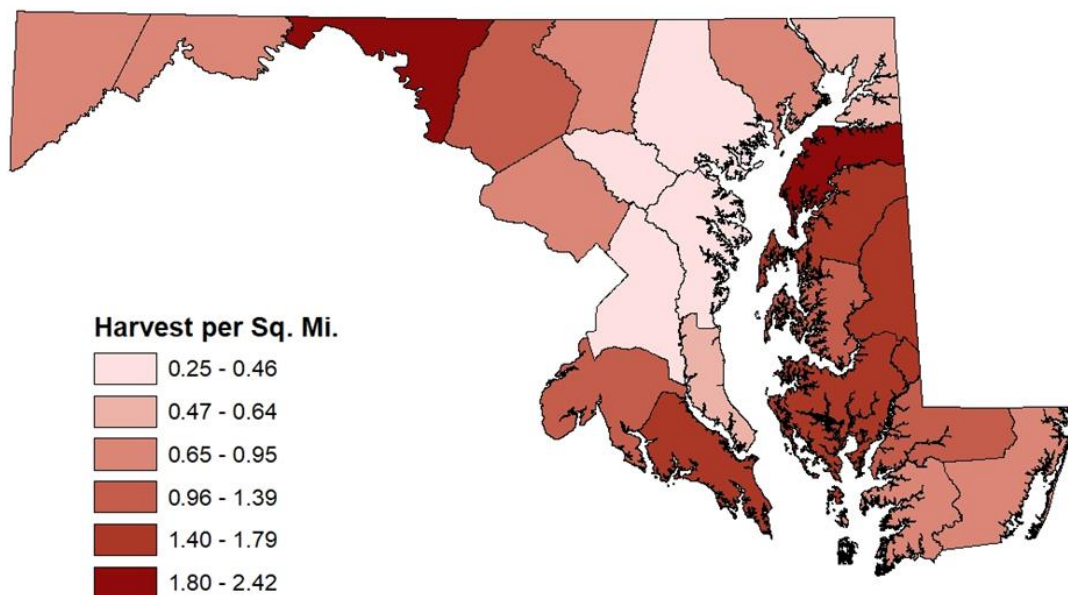


Figure 2. Maryland wild turkey density indices based on average spring turkey harvest per square mile of forest, 2016-2018.

FALL SEASON

Turkey hunters reported taking 105 wild turkeys during the one week 2017 fall season that ended on November 4 (Table 2, Figure 3). The harvest was slightly lower than the 2016 fall season harvest of 119. Fall hunting is only permitted in the three westernmost counties. Electronic checking data indicated that 41% of the harvest was comprised of juvenile turkeys, which is below the long-term average of 49%.

Table 2. Maryland's fall turkey season harvest, 2011-2017.

County	2011	2012	2013	2014	2015	2016	2017	%Change 2016-2017	10-year average
Allegany	72	50	56	52	36	35	24	-30.6	55
Garrett	64	40	59	54	49	51	55	8.2	58
Washington	31	21	42	28	31	33	26	-22.6	31
Total	167	111	157	134	116	119	105	-12.1	145

WINTER SEASON

Hunters reported taking 87 wild turkeys during the 2018 winter turkey season that was open January 18-20 statewide (Table 3). The harvest was lower than the 109 birds taken during the 2017 winter season. Turkeys were harvested in 22 of the 23 counties, with St. Mary's, Dorchester, Garrett and Washington reporting the highest numbers. Adult males comprised 37 percent of the harvest with the remainder females and juveniles. Eighty-three percent were taken with a shotgun, but some hunters harvested their bird with a crossbow or vertical bow. The winter turkey season was established in 2015 to provide hunters additional turkey hunting opportunities while minimizing conflicts with other hunting seasons.

SPRING SEASON

Hunters reported harvesting a total of 3,861 wild turkeys during the 2018 regular spring and junior hunt turkey seasons (Table 1, Figure 3). The harvest was 8 percent lower than 2017's record harvest of 4,175 but well above the 10-year average of 3,406. The decline can be attributed to several years of below-average reproduction in most regions.

Juvenile gobblers comprised 19% of the harvest, below the long-term average of 26%.

Table 3. Maryland's winter turkey season reported harvest, 2015-2018.

County	2015	2016	2017	2018
Allegany	6	3	9	6
Anne Arundel	3	0	2	4
Baltimore	2	2	7	1
Calvert	5	1	0	1
Caroline	6	8	2	2
Carroll	0	2	2	3
Cecil	0	2	2	2
Charles	5	0	10	4
Dorchester	15	6	14	8
Frederick	4	4	6	6
Garrett	11	4	9	8
Harford	4	3	2	2
Howard	1	1	1	1
Kent	4	1	3	4
Montgomery	4	0	3	2
Prince George's	1	1	3	0
Queen Anne's	7	2	5	5
Somerset	3	4	3	2
St. Mary's	7	6	7	10
Talbot	3	2	1	2
Washington	6	7	11	8
Wicomico	4	0	6	3
Worcester	7	2	1	3
Total	108	61	109	87

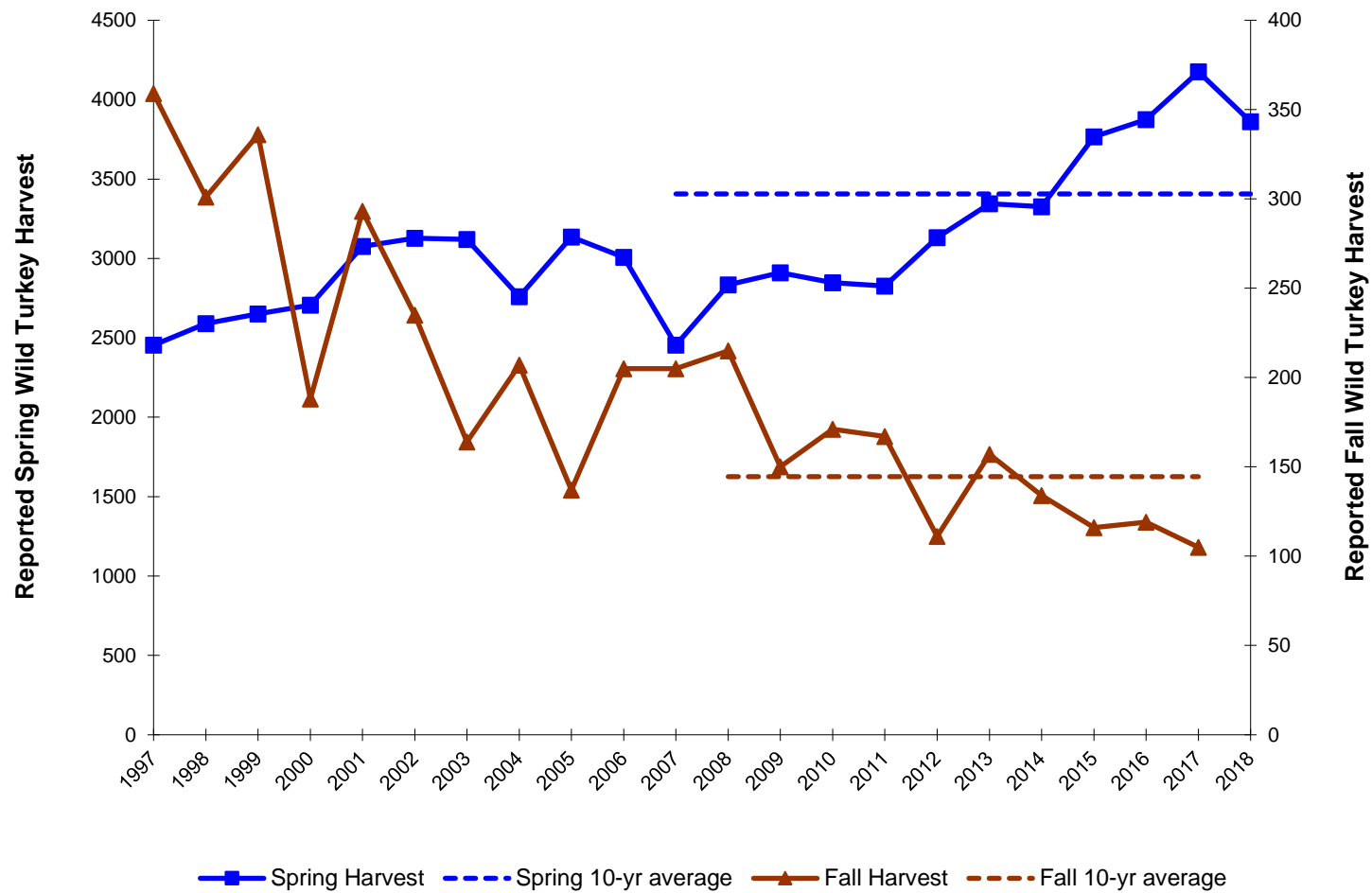


Figure 3. Reported Maryland wild turkey harvest in spring and fall seasons, 1997-2018.

HUNTER PARTICIPATION

The annual hunter mail survey estimates that the number of turkey hunters in Maryland is lower than in the 1980's and 90's, but has remained generally stable over the last 10 years (Figure 4). Participation in fall turkey hunting participation has declined by over 80%. In the 2016-17 season, about 1,800 fall turkey hunters spent 4,200 days afield. Success rate in the fall season is typically about 10%.

Spring turkey hunting participation peaked in the mid-1990s when the season was opened statewide. The most recent hunter mail survey estimated that about 10,300 spring turkey hunters hunted 52,100 days. About 30% of spring hunters are typically successful in taking at least one turkey.

An estimated 1,000 hunters spent 1,500 days pursuing turkeys during the winter season statewide.

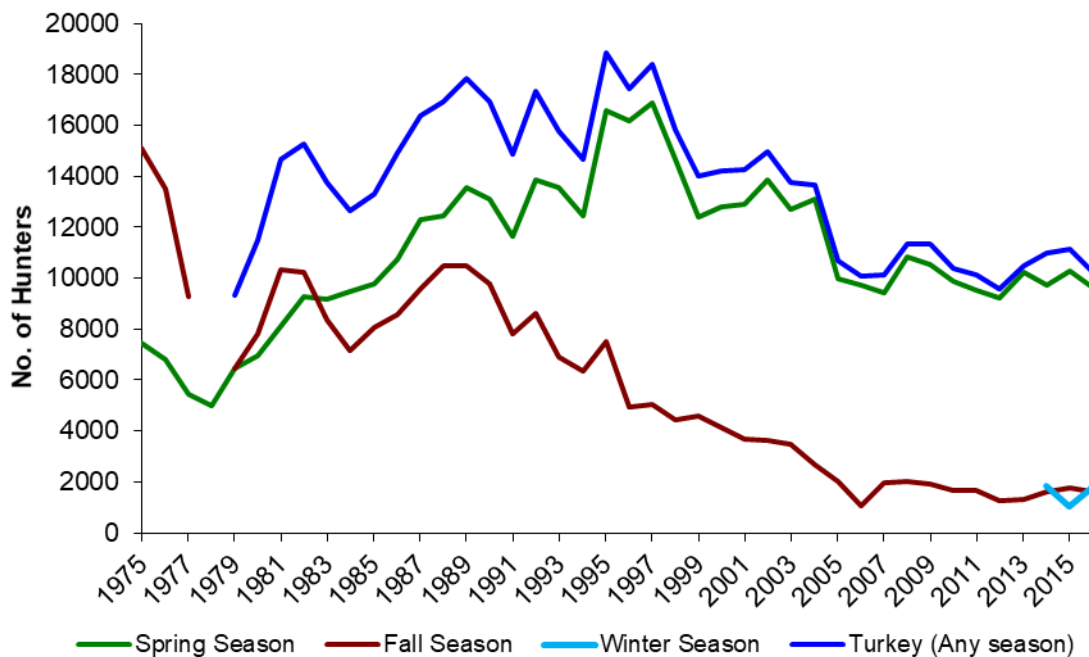


Figure 4. Number of Maryland wild turkey hunters, 1975-76 - 2016-17. Data from annual hunter mail survey.



SUMMER WILD TURKEY OBSERVATION SURVEY

A statewide turkey observation survey has been conducted in Maryland since 1993. Survey forms are distributed to interested staff, hunters, landowners and citizens. The survey is conducted during the months of July and August when broods are most easily observed and age can be readily determined. A total of 2,582 wild turkeys were recorded by the 99 individuals or groups that returned survey forms in 2018, lower than the 3,415 turkeys observed by 84 participants in 2017. Statewide, the 2018 reproductive index was at a record low average of 1.9 poults per hen. This is below both the 2017 index of 2.3 poults per hen and the 16-year average of 3.0 poults per hen. The survey documented below average reproduction in all regions of the state.



Statewide, a record low of 48% of hens were observed with young, well below the average of 69%. This suggests that nesting success was very low this year, especially for 1st nesting attempts. Only 39% of hens were seen with a brood in July. The average number of poults observed per brood was also at a record low of 3.2, well below the average of 3.7 and indicative of poor poult survival. Above average spring and summer rainfall in most of the state may have impacted reproduction this year. This is the 3rd consecutive summer of poor reproduction in most of the state, possibly resulting in a decline in the statewide population.

More information can be found in Table 3 and Figures 5 and 6. The full report can be found online [here](#).

Table 3. Regional Wild Turkey Observation Survey data, 2018

	No. of Observations	No. of Turkeys Observed					Percent of Hens Observed w/ Brood	Average No. Poults per Hen	Average No. Poults per Brood
		Hens	Poults	Gobblers	Unidentified	Total			
Western	107	205	383	60	6	654	53.7	2.3	3.9
Central	34	38	89	19	3	149	55.3	2.4	4.1
Southern	86	112	174	97	0	383	49.1	1.7	3.5
Upper ES	140	235	306	106	2	649	42.1	1.7	3.6
Lower ES	135	261	346	137	3	747	47.1	1.7	3.6

¹ Regions defined as:

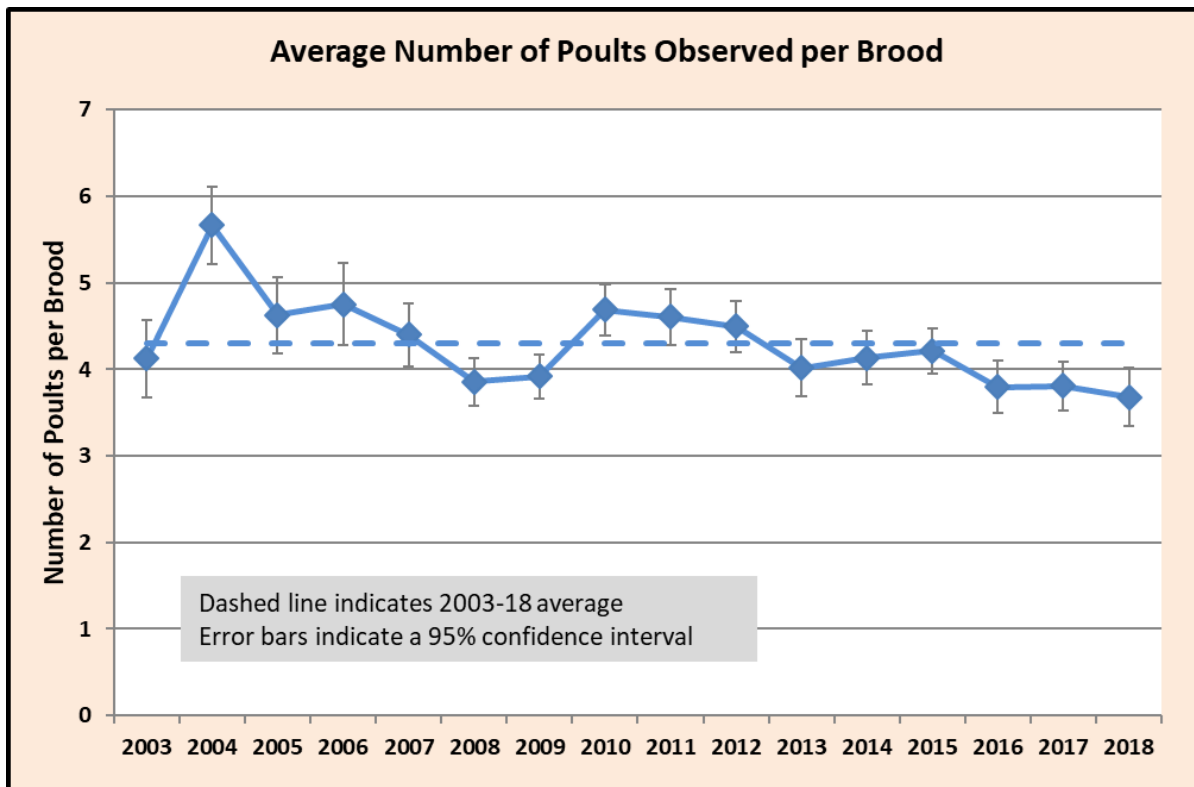
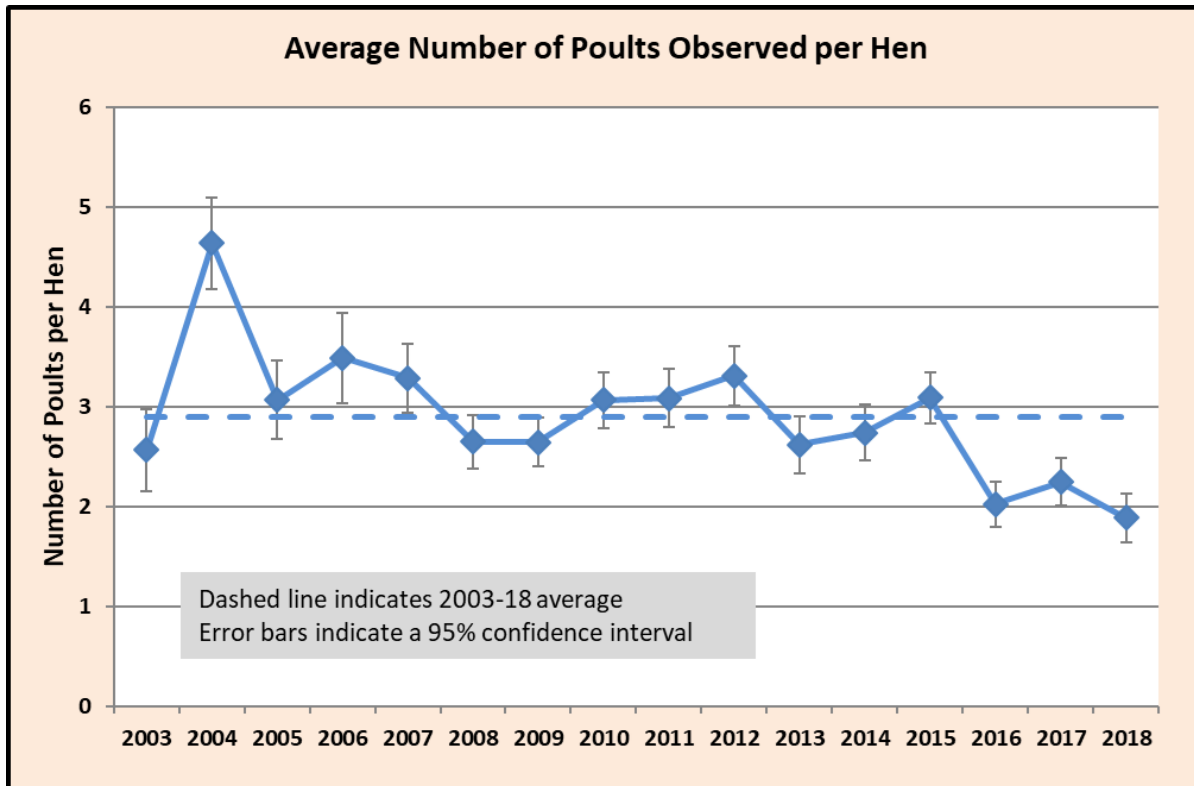
Western – Garrett, Allegany, Washington;

Central – Frederick, Carroll, Baltimore, Harford, Howard, Montgomery, Anne Arundel

Southern – Prince George's, Calvert, Charles, St. Mary's

Upper Eastern Shore – Cecil, Kent, Queen Anne's, Talbot, Caroline

Lower Eastern Shore – Dorchester, Wicomico, Worcester, Somerset



Figures 5 and 6. Average number of poults observed per hen and per brood on summer turkey survey, 2003-18. Dashed line indicates average. Error bars indicate a 95% confidence interval.

SPRING TURKEY HUNTER SURVEY

A survey was conducted in summer 2017 to investigate preferences, opinions and behaviors of Maryland spring season turkey hunters. Response rate was 60%. Overall, responses were similar to the survey conducted in 2007. Hunters were generally satisfied with current seasons and bag limits. Responses regarding negative hunter interference and safety concerns were fewer than 10 years ago, indicating that hunt quality has improved on average. The full results summary is posted on the website [here](#).

ARCHERY HUNTER SURVEY

An annual survey of Maryland archery hunters has been used since 2002 to gather trend data on a variety of species. Archers observed an average of 19.9 wild turkeys per 100 hours in the 2017-18 season (Figure 7). This is slightly lower than the 2016-17 observation rate (20.9 turkeys per 100 hours) but above the long-term average (16.4 turkeys per 100 hours). Turkey observation rates were highest in the Appalachian Plateau Province (32.0 turkeys per 100 hours), followed by the Ridge and Valley Province (29.6 per 100 hours). Archers observed fewer turkeys in the Western Coastal Province (24.6 per 100 hours) and Eastern Coastal Province (18.9 per 100 hours). The observation rate was lowest in the Piedmont Province. The results suggest that wild turkeys remain abundant in most parts of the state, but populations have recently declined in some regions. The full report can be found online [here](#).

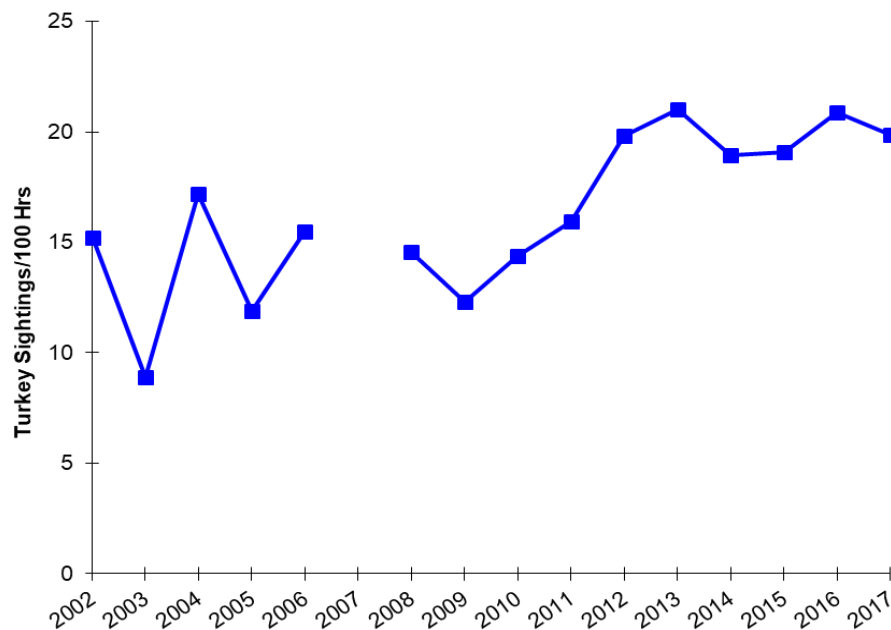


Figure 7. Maryland statewide wild turkey observation rates by archery hunters (sightings/100 hours), 2002-03 – 2017-18. Insufficient data precluded analysis of the 2007-08 bowhunter survey.

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Photos courtesy of the National Wild Turkey Federation and Maryland Department of Natural Resources